

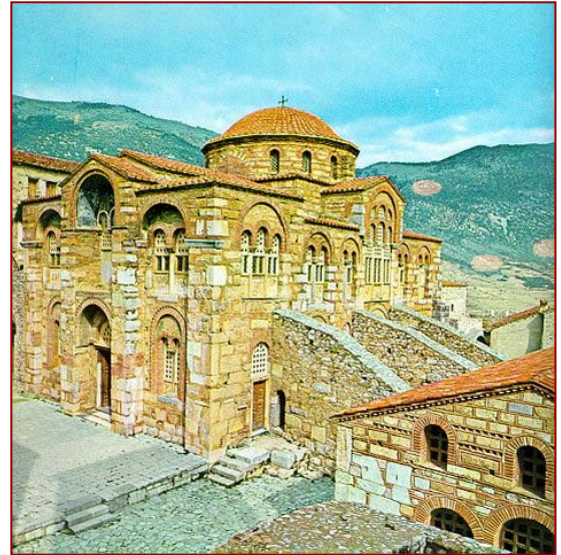
## MONASTERY OF HOSSIOS LUCKAS

### Engineering geological conditions and problem:

- The monastery lies on the west slope of Mt. Helikon, below the acropolis of ancient Steirion. It was built

during the 10-11th c. AD.

- Weathering of building stones
- Weathering and damage of marble columns
- Stability problems of the monuments
- Landslide phenomena
- Damage of frescos and icons
- Fractures on the walls



### Protection measures already have been taken or have to be taken:

- A conservation research was performed in the frame of a EU program, during 1995 (GSRT-GR-EPET II)
- Characterisation of stones
- Estimation of the depth of damage using ultrasonic techniques
- Determination of the treatment effectiveness by measuring the increase of the compressive strength and the ultrasonic velocity of the treated specimens
- Conservation of building stones and mortars
- Stabilization of the monument
- Conservation of frescos
- Slope stability analysis



### References on studies already performed:

- 1st EPHORATE OF BYZANTINE ANTIQUITIES: Reports on restoration activities.
- CHIRISTARAS, B. (1997): Estimation of damage at the surface of stones using non destructive techniques, Structural Studies, Repairs and Maintenance of Historical Buildings, in Advances in Architectural Series of Computational Mechanics Publications, Southampton, pp. 121-128.